REMARKS

Claims 1-19 were pending in the present Application. Claims 1 and 17 have been amended and Claim 5 has been cancelled, leaving Claims 1-4, 6-19 for consideration in the present amendment. No new matter has been entered by way of amendment.

It is believed the amendments made herein may be properly entered at this time, i.e., after final rejection, because the amendments do not require a new search or raise new issues and they reduce issues for appeal.

Filed concurrently herewith is a terminal disclaimer of prior U.S. Patent No. 6,147,009 to Grill, executed by an authorized representative listed in the originally filed Power of Attorney documents.

Reconsideration and allowance of all pending claims is respectfully requested in view of the above amendments and the following remarks.

First Claim Rejection Under 35 U.S.C. §102(e)

Claims 1-19 stand rejected under 35 U.S.C. §102(e), as allegedly unpatentable over U.S. Pat. No. 6,147,009 to Grill (hereinafter "Grill"). Applicants respectfully traverse.

Grill is generally directed to the use of hydrogenated oxidized silica carbon films for use as dielectric materials.

To anticipate a claim under 35 U.S.C. §102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988).

Grill fails to disclose processes for depositing a low k dielectric film on a substrate comprising, *inter alia*, flowing a precursor gas containing Si, C, H and an oxygen-providing gas into a PECVD chamber containing a substrate, wherein the precursor gas and the oxygen-providing gas are substantially free of nitrogen, and wherein the oxygen

providing gas is selected from the group consisting of carbon monoxide, carbon dioxide, and combinations comprising at least one of the foregoing gases. Grill fails to disclose the claimed oxygen providing gases.

Since Grill fails to teach at least one element of Applicant' claims, the rejection is improper and requested to be withdrawn.

Second Claim Rejection Under 35 U.S.C. §102(e)

Claims 1-5 and 7-19 stand rejected under 35 U.S.C. §102(e), as allegedly unpatentable over U.S. Pat. No. 6,159,871 to Loboda et al. (hereinafter "Loboda").

Loboda is generally directed to hydrogenated silicon oxycarbide films. The films are produced from a reactive gas mixture comprising a methyl containing silane and an oxygen providing gas. Suitable oxygen containing gases include air, ozone, oxygen, nitrous oxide and nitric oxide. As described by Loboda, the oxygen providing gas is preferably nitrous oxide (see Loboda, Col. 3, ll. 1-3). An advantage when using nitrous oxide as the oxygen providing gas is that the film composition and properties remain essentially the same even when the amount of nitrous oxide in the reactive gas mixture is significantly varied.

Like Grill noted above, Loboda also fails to disclose processes for depositing a low k dielectric film on a substrate comprising, *inter alia*, flowing a precursor gas containing Si, C, H and an oxygen-providing gas into a PECVD chamber containing a substrate, wherein the precursor gas and the oxygen-providing gas are substantially free of nitrogen, and wherein the oxygen providing gas is selected from the group consisting of carbon monoxide, carbon dioxide, and combinations comprising at least one of the foregoing gases. Because Laboda fails to disclose the claimed oxygen providing gases, the rejection is requested to be withdrawn.

Claim Rejection Under 35 U.S.C. § 103(a)

Claim 6 stands rejected under 35 USC 103(a) over Laboda as applied to Claim 1 above, and further in view of U.S. Pat. No. 5,028,566 to Lagendjik (hereinafter "Lagendjik"). Applicants respectfully traverse.

Laboda is discussed above.

Lagendjik is generally directed to deposition of silicon dioxide films by oxidative decomposition of organosiloxanes. There is no disclosure of processes including, *inter alia*, an oxygen-providing gas selected from the group of carbon monoxide, carbon dioxide, and combinations comprising at least one of the foregoing gases.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

Applicants respectfully assert that a prima facie case of obviousness has not been established against Claim 6. The cited references, individually or in combination, fail to teach or suggest the use of the claimed nitrogen free precursor gases for depositing a film consisting essentially Si, C, O, and H.

For at least this reasons, Claim 6 is patentably distinguished over the cited references. Withdrawal of the rejection is hereby requested.

Double Patenting Rejection

The rejection of Claims 1-19 under the judicially created doctrine of obviousness-type double patenting over Claims 1, 4, 6, and 7 of U.S. Patent No. 6,147,009 to Grill has been rendered moot in view of the terminal disclaimer, filed concurrently herewith.

FIS9-2001-0156

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 09-0458 maintained by Applicants' attorneys.

Respectfully submitted,

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Terminal Disclaimer To Obviate A Double Patenting Rejection Over A Prior Patent	Docket No. FIS9-2001-0156

In Re Application Of: **Edelstein et al.**

Serial No.	Filing Date	Examiner	Group Art Unit
10/005,861	11/08/2001	Fuller, Eric B.	1762

Invention: **LOW K DIELECTRIC FILM DEPOSITION PROCESS**

Owner of Record: **International Business Machines Corporation**

TO THE COMMISSIONER FOR PATENTS:

The above-identified owner of record of a 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 to 156 and 173, as presently shortened by any terminal disclaimer, of prior Patent No. 6,147,009 . The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors and/or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 to 156 and 173 of the prior patent, as presently shortened by any terminal disclaimer, in the event that it later expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. 1.321, has all claims cancelled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of an organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney of record.

Steven Capella
Signature

Dated: Mar. 9, 2004

Steven Capella, Reg. No. 31,086
Typed or Printed Name

☒ Terminal disclaimer fee under 37 C.F.R. 1.20(d) included.
☐ PTO suggested wording for terminal disclaimer was unchanged.
☐ Certification under 37 C.F.R. 3.73(b) is required if terminal disclaimer is signed by the assignee.

P32/REV01